

ABSTRACT OF THE DISCLOSURE

A non-invasive portable apparatus for analyzing the performance of gas-filled window glazing units is disclosed. The operation of the apparatus is based on discharging the spacing between the panels (2a, 2b) of the window glazing unit (1) by applying rapidly alternating electrical field to the spacing between the panels of the window glazing unit, on collecting and analyzing the emitted discharge light in different structural intervals. The discharge is created by a needle-like electrode (5), and the inner conducting layer (2a) of the glazing unit serves as another electrode. The localization of the discharge in the vicinity of the end of the needle-like electrode (5) makes it possible to collect the emitted light without routine adjustment of the optical system. In this case, factory-adjusted lenses (4a) can be used to collect the light from the discharge, and the collected light can be transported to light detectors (9a-9d) by using fiber optics (6), which eliminates influence of instability to the discharge geometry.

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